

SPECIFICATION AMENDMENTS

Please replace paragraph [0033] with the following amended paragraph:

[0033] Fig. 5 shows a graph of a multi-segment clock distribution timing margin according to an example embodiment of the present invention. For a delay path with multiple segments, the NDR-based graphical analysis can be generalized. In Fig. 5, a five segment clock delay distribution is followed by a data delay segment. Assuming each clock segment has progressively increasing sensitivity to voltage noise, the net timing margin loss is represented by five integral deltas [[22-30]]22, 24, 26, 28, and 30 between the sensitivity curves. Each integral is separated from the next by the delay of its corresponding segment. There is no distinction between clock and data segments for this generalization. Moreover, the NDR shown in Fig. 5 is a pure small signal representation, i.e., '1' has been subtracted from the Y-axis.

Please replace paragraph [0034] with the following amended paragraph:

[0034] The X-axis of the graph represents time where the numbers shown along the X-axis represent clock cycles. The Y-axis represents non-normalized delay. The 0 point on the Y-axis in Fig. 5 corresponds to the Y-axis '1' dashed line level in Figs. 3 and 4. Each waveform [[10-18]]10, 12, 14, 16, and 18 in Fig. 5 represents a different segment in the clock distribution with a different sensitivity to voltage noise. The first waveform 20, with the '+' signs, represents the data. The different sensitivities of the five segments in the clock distribution path are represented by five individual waveforms. These are shown as waveforms 10, 12, 14, 16 and 18 (C0-C4). Waveform C0 is the waveform closest to the Y-axis '0' level and contains diamond shapes on the waveform.

Waveform C1 is just above waveform C0 (in the rising portion of the waveforms) and contains solid boxes on the waveform. Waveform C2 is just above waveform C1 and is shown as a plain solid line. Waveform C3 is shown above waveform C2 and has 'X's on it. Waveform C4 is above waveform C3 but below the data waveform and is shown with asterisks on it. The boxes [[22-30]]22, 24, 26, 28, and 30 shown between the curves are all analogous to the "A" box shown in Fig. 4.

Please replace paragraph [0045] with the following amended paragraph:

[0045] It may then be determined if the desired number clock ticks have been analyzed, S11, and if not, S6 through S10 are repeated for the next clock tick. If the desired number clock ticks have be analyzed, a net timing loss curve may be constructed S12. The maximum loss may then be identified S13. A determination is made whether this loss is acceptable S14, and if so, the process is completed S14. If the loss is not acceptable, or further analysis or tweaking is desired, the pre-distribution delay and/or sensitivity is revised, S15, and S5 through S14 repeated.